

What is claimed is:

- 1) A method for authenticating, comprising the steps of:
storing a first short-range radio address for a cellular device in a processing
5 device;
obtaining an authentication message in the processing device;

storing a second short-range radio address in the cellular device, wherein the first
short-range radio address and the second short-range radio address are the same;
10 calculating a first message digest responsive to the authentication message and
first short-range radio address;
transmitting, by a cellular network coupled to the processing device, a cellular
message including the authentication message and the first message digest to the cellular
device;
15 receiving the cellular message, by the cellular device;
calculating a second message digest responsive to the authentication message and
the second short-range radio address; and,
comparing, by the cellular device, the first message digest to a second message
digest to authenticate the cellular message.
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- 2) The method of claim 1, wherein the authentication message is randomly
calculated.
- 3) The method of claim 1, wherein the first message digest is a 128-bit value
25 calculated by a one-way hash software component.
- 4) The method of claim 1, wherein the one-way hash software component is
a MD5 software component.

5) The method of claim 1, wherein the first and second short-range radio addresses are a Bluetooth™ address.

6) The method of claim 1, wherein the cellular device includes a short-range
5 radio transceiver.

7) The method of claim 1, wherein the cellular device is in a short-distance wireless network

8) The method of claim 1, wherein the short-distance wireless network is a
10 Bluetooth™ wireless network.

9) The method of claim 7, wherein the short-distance wireless network is an
15 802.11 wireless local area network.

10) The method of claim 1, wherein the first and second short-range radio addresses are 48-bit values.

11) The method of claim 1, wherein the cellular device is a cellular telephone.

12) The method of claim 1, wherein the processing device is a server.

13) A method for authenticating, comprising the steps of:
storing a first short-range radio address, for a cellular device, in a processing
25 device;
obtaining an authentication message in the processing device;
storing a second short-range radio address in the cellular device, wherein the first short-range radio address and the second short-range radio address are the same;

calculating, by the processing device, a first message digest responsive to the authentication message and first short-range radio address;

transmitting, by a cellular network coupled to the processing device, a cellular message including the authentication message to the cellular device;

5 receiving the cellular message, by the cellular device;

calculating a second message digest responsive to the authentication message and the second short-range radio address;

transmitting, by the cellular device, the second message digest; and,

10 comparing, by the processing device, the first message digest to a second message digest to authenticate the cellular message.

14) A method, comprising;

storing a first short-range radio in a cellular device;

15 storing a second short-range radio addresses in a processing device, wherein the first short-range radio address and the second short-range radio address are the same;

encrypting a cellular message, by the processing device, using the second short-range radio address;

transmitting the encrypted cellular message to the cellular device; and

20 decrypting the encrypted cellular message, by the cellular device, using the first short-range radio address.

15) A method, comprising;

storing a first short-range radio in a cellular device;

25 storing a second short-range radio addresses in a processing device, wherein the first short-range radio address and the second short-range radio address are the same;

encrypting a cellular message, by the cellular device, using the first short-range radio address;

transmitting the encrypted cellular message to the processing device; and

decrypting the encrypted cellular message, by the processing device, using the second short-range radio address.

- 16) A method for identifying a cellular device, comprising the steps of:
- 5 receiving, by the cellular device, a first cellular message requesting a cellular device identifier;
- reading, by the cellular device, a first short-range radio address from the device;
- transmitting, by the cellular device, a second cellular message including the first short-range radio address;
- 10 storing a second short-range radio address in a processing device; and,
- comparing the first short-range radio address to the second short-range radio address to identify the cellular device.

- 17) The method of claim 16, wherein the first and second short-range radio addresses are Bluetooth™ addresses.

- 18) The method of claim 16, wherein the cellular device includes a short-range radio transceiver.

- 19) The method of claim 16, wherein the cellular device is in a short-distance wireless network

- 20) The method of claim 19, wherein the short-distance wireless network is a Bluetooth™ wireless network.

- 21) The method of claim 16, wherein the short-distance wireless network is an 802.11 wireless local area network.

22) The method of claim 16, wherein the reading step includes executing a host controller command.

23) The method of claim 22, wherein the host controller command is
5 HCI_Read_BD_ADDR and the short-range radio address is BD_ADDR.

24) The method of claim 16, wherein the first and second short-range radio addresses are 48-bit values.

10 25) The method of claim 16, wherein the cellular device is a cellular telephone.

26) The method of claim 16, further comprising the steps of receiving a third cellular message responsive to the second cellular message.

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27) The method of claim 26, wherein the first, second and third cellular messages are generated by a cellular network coupled to a processing device storing the second short-range radio address corresponding to the cellular device.

20 28) The method of claim 16, wherein the first, second and third cellular messages are in a Global System for Mobile communications ("GSM") protocol.

29) A method for identifying a cellular device, comprising the steps of:
receiving, by the cellular device, a first cellular message having a first short-range
25 radio address;

reading a second short-range radio address from the cellular device;

comparing, by the cellular device, the first short-range radio address with the second short-range radio address; and,

transmitting a second cellular message responsive to the comparing step.

30) A device, comprising:
a cellular transceiver capable to receive a first cellular message;
a first processor coupled to the cellular transceiver;
a first memory, coupled to the first processor, capable to store a first software
5 component for generating a command responsive to the first cellular message;
a second processor coupled to the first processor;
a short-range radio transceiver coupled to the second processor;
a second memory, coupled to the second processor, capable to store a second
software component for retrieving a short-range radio address associated with the short-
10 range radio transceiver responsive to the command, wherein the first software component
authenticates the first cellular message using the short-range radio address.

31) The device of claim 30, wherein the first cellular message includes a
message digest and the first software component includes a MD5 software component

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32) The device of claim 30, wherein the first software component is a GSM
baseband software component and the second software component is a Bluetooth™
baseband software component.

20 33) The device of claim 30, wherein the short-range radio address is a
Bluetooth™ address.

34) The device of claim 30, wherein the device is in a short-distance wireless
network

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35) The device of claim 30, wherein the short-distance wireless network is a
Bluetooth™ wireless network.

36) The device of claim 30, wherein the command is HCI_Read_BD_ADDR and the short-range radio address is BD_ADDR.

5 37) The device of claim 30, wherein the short-range radio address in a 48-bit value.

38) The device of claim 30, wherein the cellular device is a cellular telephone.

10 39) A device, comprising:
a cellular transceiver capable to receive a first cellular message;
a first processor coupled to the cellular transceiver;
a first memory, coupled to the first processor, capable to store a first software component for generating a command responsive to the first cellular message;
a second processor coupled to the first processor;
15 a short-range radio transceiver coupled to the second processor;
a second memory, coupled to the second processor, capable to store a second software component for retrieving a short-range radio address associated with the short-range radio transceiver responsive to the command, wherein the cellular transceiver generates a second cellular message including the short-range radio address to identify
20 the device.

40) A device, comprising:
a cellular transceiver capable to receive a first cellular message;
a short-range radio transceiver;
25 a first processor, coupled to the cellular transceiver and the short range radio transceiver;
a first memory, coupled to the processor, the cellular transceiver and the short-range radio transceiver, capable to store:

a first software component for executing a command responsive to the first cellular message;

a second software component for providing a short-range radio address associated with the short-range transceiver responsive to the command, wherein the cellular transceiver generates a second cellular message including the short-range radio address identifying the device.

41) The device of claim 40, wherein the command includes a function call.

42) The device of claim 41, wherein the function call is void hciReadBDAddr(BD_ADDR*bd_addr).

43) The device of claim 40, wherein the first software component is a GSM baseband software component and the second software component is a Bluetooth™ baseband software component.

44) The device of claim 40, wherein the short-range radio address is a Bluetooth™ address.

45) The device of claim 40, wherein the cellular device is a cellular telephone.

46) A system, comprising:
a processing device;
a cellular network, coupled to the processing device, for transmitting a cellular message;

a hand-held wireless device, including:

a cellular transceiver to communicate with the cellular network,
including to receive the first cellular message;

a short-range radio transceiver to communicate with the short-range radio network;

a processor coupled to the cellular transceiver and the short-range radio network;

5 a memory, coupled to the processor, to store:

a first software component for executing a software instruction responsive to the first cellular message;

10 a second software component for providing a short-range radio address associated with the short-range radio transceiver responsive to executing the software instruction, wherein the first software component authenticates the cellular message using the short-range radio address.

15 47) The hand-held wireless device of claim 46, wherein the first software component is a GSM baseband software component and the second software component is a Bluetooth™ baseband software component.

20 48) The hand-held wireless device of claim 46, wherein the short-range radio address is a Bluetooth™ address.

49) The hand-held wireless device of claim 46, wherein the device is in a short-distance wireless network

25 50) The hand-held wireless device of claim 46, wherein the cellular device is a cellular telephone.

51) A system, comprising:
a processing device;
a cellular network, coupled to the processing device, for transmitting a cellular message;

5 a hand-held wireless device, including:

a cellular transceiver to communicate with the cellular network,
including to receive the first cellular message;

a short-range radio transceiver to communicate with the short-range radio network;

10 a processor coupled to the cellular transceiver and the short-range radio network;

a memory, coupled to the processor, to store:

a first software component for executing a software instruction responsive to the first cellular message;

15 a second software component for providing a short-range radio address associated with the short-range radio transceiver responsive to executing the software instruction, wherein the cellular transceiver generates a second cellular message including the short-range radio address identifying the hand-held wireless device.

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52) An article of manufacture, including a computer readable medium, in a device, comprising:

a cellular software component for executing a first instruction responsive to a first cellular message from a cellular network; and,

25 a short-range radio software component to provide a short-range radio address responsive to executing the first instruction, wherein the cellular software component authenticates the first cellular message using the short-range radio address.

53) The article of manufacture of claim 52, wherein the cellular software component generates a control signal to a cellular transceiver capable to generate a second cellular message containing the short-range radio address identifying the device.